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CENTRAL INTELLIGENCE AGENCY

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50X1-HUM

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50X1-HUM

1. The VEB Werk fuer Elemente der Nachrichtentechnik "Carl von Ossietzky" (Dralowid), Potsdamer Strasse 117-119, Berlin-Teltow, has developed the following types of germanium single-crystal diodes: 1/

RD 100 (Richtungsdiode) with 5 to 10 mA transit current (Durchlassstrom) at plus 1 V; Resistance ratio (Widerstandsverhaeltnis) (Rr) 5,000 and above.

RD 100a: 10 to 14 mA at plus 1 V; Rr 10,000 and above.

RD 110: 2 to 4 mA at plus 1 V; Rr 2,000 and above.

RD 112: 1.5 to 3.5 mA at plus 1 V; Rr 1,500 and above.

RD 113: 1.5 mA at plus 1 V; Rr 150 and above.

MD 100 (Mischdiode) with 0.2 mA transit current at 0.3 V (mittlere Aussteuerung)

2. The enterprise has developed the following types of silicon single-crystal detectors:

MD 1 (Mischdetektor): 0.3 V (medium); transit current 0.2 mA and more; conversion loss 7 db and under.

MD 2: 500 Ohm plus minus 12% at 70 mV; Resistance ratio 2 and above.

RD 1 (Richtdetektor): 4 to 10 mA transit current at plus 1 V; Resistance ratio 30 and above.

RD 2: 2 to mA; Rr 100 and above.

RD 3: 1 to 2 mA; Rr 150 and above.

RD 4: 0.2 to 1 mA; Rr 100 and above.

RD 5: 0.2 to 0.5 mA; Rr 100 (plus minus 1 V) and above.

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50X1-HUM

RD 6 (rectifier of high sensitivity): 500 Ohm plus minus 12% at 70 mV; Rr 2 and above.

3. Although development of the diodes and detectors is completed, they are produced in limited number only. 50X1-HUM
Diodes and detectors are for use as rectifiers, meter 50X1-HUM
rectifiers, demodulators, adjustable AC resistances, ring modulators, discriminators, limiters, A.V.C. generators, mixers, and distorters. Their frequency range includes audio frequency, carrier frequency, UKW, and highest frequency up to 3.2 centimeters.

4. Transistors are not yet under development at the enterprise, but there are plans to start transistor development in 1954. Dr. Falter (fnu) and Dr. Haiber (fnu), who are the chief development technicians, view the development of diodes and detectors as a preliminary stage of transistor development, although they have strong doubts whether the enterprise will be able to tackle the problem of transistor development successfully. Dr. Haiber is rather skeptical with respect to the future of transistors. He has expressed the opinion that even in the United States the great hopes initially attached to the development of transistors have recently given way to disillusionment because of the difficulties of fabrication, high costs, and bad functioning. The plant has, nevertheless, submitted a proposal for the development of transistors in 1954. As of early October 1953, the Central Office for Research and Technology (ZAFT) had not approved the project.

5. Dralowid is also engaged in the development of resistances for telecommunications technology which stay constant in the temperature range from +50° to -70° Centigrade. The temperature coefficient is ten power minus five, an improvement over the value thus far attained in East Germany (ten power minus four).

50X1-HUM

1/ Comment. previous 50X1-HUM
transistor development 50X1-HUM
probably referred to the development of germanium diodes, which was interpreted as an initial step in transistor development.